

REASON

- **To achieve realistic and effective training with TWGSS, tank crews must be able to correctly start, align, and verify alignment of TWGSS to the tank's FCS.**

TRAINING OBJECTIVE

- **Given an operational M1/M1A1 tank with TWGSS installed and prepare-to-fire checks and boresighting completed, the crew will perform the following tasks:**
 - **Conduct system start-up IAW TM 9-6920-709-12&P-1-1**
 - **Conduct system alignment IAW TM 9-6920-709-12&P-1-1**
 - **Perform alignment verification**

CONTROL PANEL

CONTROL PANEL FUNCTIONS

- **Monitor ammunition and ammunition upload**
- **Result presentation: numerical/ graphic**
- **System alignment**
- **BIT and error presentation**
- **Controller functions**
- **Data storage on TDRS memory card**

CONTROL PANEL MENU

PUSHBUTTON FUNCTIONS

- **ENTER**
 - **Access to menus**
 - **Saves/accepts data**
- **ESC**
 - **Aborts menu**
 - **Inhibits function/selection**

PUSHBUTTON FUNCTIONS

- **DOWN/LEFT**
 - **Moves cursor down or left**
 - **Decreases values for data**
- **UP/RIGHT**
 - **Moves cursor up or right**
 - **Increases values for data**

STARTUP PROCEDURE

- **Set GTD switch to MANUAL**
- **Switch on vehicle master power**
- **Switch on turret power**
- **Check for FCS malfunctions**
- **Switch on utility power (TNB)**

BIT INDICATIONS

- **Control panel indication (pop-up screen)**
- **Sound indication on tank intercom**
- **Visual indications in hit indicators**

TROUBLESHOOTING PROCEDURE

- **Consult manual**

WARNING

Do NOT disconnect/connect cables with vehicle master power switch in ON position:

- **Damage can occur to TWGSS or tank**
- **Main gun/turret could move suddenly and injure personnel**

ALIGNMENT

- **Alignment is the process where TWGSS is aligned to the tank's FCS.**

TANK SETTING DURING ALIGNMENT

- **Boresighted and operational tank with TWGSS installed**
- **1200 m entered into FCS and boresight pressed on CCP**
- **Reticle aiming point of GPS/day and GPS/thermal**
- **Boresight cross of GAS**

TWGSS ALIGNMENTS

- **Cant alignment**
- **Laser alignment**
- **TBOS for GAS**
- **TBOS alignment for GPS day mode**
- **TBOS alignment for GPS thermal mode**
- **TPS Alignment**

SUMMARY

- **Startup procedures**
- **System alignment**
- **Alignment verification**

CLOSING STATEMENT

- **To achieve the desired training result with TWGSS, you must be able to correctly conduct startup, system alignment, and alignment verification of TWGSS to the tank FCS.**